WHAT IS CLAIMED IS:

1. A solution of metal-polymer cholate(s), with the quantity of substances in percentage, falling within ranges of: water 0.1~99.87% and/or R-COOH: 0.01~40% soluable carbohydrate molecules (including glucosamine) and/or hydroxyl or hydroxyl amino and/or carbohydrate polymers (including chitosan): 0.01~30% and metal salts 0.01~30%, and generally added/blended or heated/mixed according to a routine method to form a solution, wherein the R-COOH is an organic acid or an organic acid matter including one or more metal-polymer cholates.

2. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) is comprised of water and R-COOH soluble carbohydrates molecules and/or hydroxyl and/or carbohydrates polymer, added with metal salts and ammonia or amine matters, and mixed evenly according a regular method.

3. The solution of metal-polymer cholate(s) of claim 1, wherein said solution of metal-polymer cholate(s) is comprised of water and R-COOH soluble carbohydrate molecules and/or monosaccharide bimolecules, added with metal salts and ammonia or amine matters, and mixed evenly according to a routine method practice.

4. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) is comprised of water and R-COOH and/or alkaline saponification soluble R-COOH having high or middle quanity of alkyl R such as fatty acid and/or carbohydrate molecules, and added with metal salts and ammonia or amine matters, and mixed evenly according to a routine method.

5. The solution of metal-polymer cholate(s) of claims 1, wherein the metal salt is one or more monovalent, bivalent, or trivalent metal salts and the metal

salt is a beryllium, magnesium, calcium, strontium, barium, radium, nickel, chromium, lead, copper, iron, zinc, titanium, manganese, cobalt, silver, gold, platinum, palladium, cadmium, lithium, rubidium, cesium, mercury, tin, zirconium, aluminum, thallium, antimony, bismuth, germanium, gallium, molybdenum, tungsten, yttrium, scandium, rhodium, iridium, technetium, osmium, ruthenium, rhenium, vanadium, indium, lanthanum and actinium series metal salt.

6. The solution of metal-polymer cholate(s) of claims 1, wherein the number of R-COOH is equal to or greater then one, and the R is an alkyl radical or an alkyl matter, amd the R-COOH is monocarboxylic acid, dicarboxylic acid, tricarboxylic acid, acetic acid, citric acid, vitamin C, salicylic acid, ethylene glycol, formic acid, propionic acid, malonic acid, lactic acid, malic acid, succinic acid, adipic acid, maleic acid, fumaric acid, ortho acid, oxalic acid, lauric acid, tartaric acid, lycium acid, humic acid, nitrified humic acid, fatty acid, opines in a plant, carboxyl acid fiber, and carboxyl resin such as Amberlite IRC-50.

7. The solution of metal-polymer cholate(s) of claims 1, wherein the carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer is one or more carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer selected from the collection of sucrose, maltose, lactose, rechalose; disaccharide group, monosaccharide group (including glucosamine), chitosan, degradated oils, seaweed cell wall (containing calcium without adding a metal salt), cereal such as an unhusked rice (containing calcium without adding a metal salt), cytokinin-O-glucosides including monosaccharide bimolecules or polyvinyl alcohol together with ammonia (or amine) matter or separate polyvinyl alcohol, or humic acid together with ammonia (or amine) matter without requiring a dissolution of acid, nitrified humic acid, peat, separate humic acid, nitrified humic acid, peat, or amino polyvinyl alcohol, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and

1~4% of chitosan, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% artificial synthesized chitosan, or hydroxypropylmethyl cellulose (HPMC) together with ammonia (or amine) matter, or hydroxypropylmethyl cellulose (HPMC), or hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or/and oil or/and sugar mixed with each other.

8. The solution of metal-polymer cholate(s) of claim 1, wherein the metal-polymer cholate is a monosaccharide molecule (including glucosamine) or monosaccharide bimolecule or disaccharide or hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer solution of metal-polymer cholate(s), wherein the polymer bridging agent (preferably a solution of metal-polymer cholate(s) containing monosaccharide or monosaccharide bimolecule) and/or inorganic polymer carrier (including inorganic and organic bridge inorganic polymer or nano inorganic polymer) and/or plant fiber (including carboxyl acid fiber or modification having carboxyl acid fiber) and/or carboxyl resin such as amberlite IRC-50 and/amino resin or inorganic matter such as polylysine or aminosilane, wherein the metal-polymer cholate and/or inorganic polymer carrier and/or plant fiber and/or carboxyl resin and /amino resin or inorganic matter can perform solid-liquid separation and purification for amino metal compound or amino metal polymer or amino nano metal polymer or amino nano metal compound or nano metal polymer or nano metal compound or amino biological protein or pure biological protein.

9. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) includes a moisture absorbent combined with the hybrid.

10. The solution of metal-polymer cholate(s) of claims 8, wherein the polymer bridging agent or hybrid moisture absorbent is polyvinylpyrrolidone (PVP).

11. The solution of metal-polymer cholate(s) of claim 1, further including a protein enzyme or a bacteria or a cell.

12. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) and/or the hydroxyl polymer including a silicic acid group and/or a nano powder.

13. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) is used for the nano material production or nano ceramic or nano plastic or nano textile industry from gas, liquid to solid comprising ozone, strong oxygen O^{-2}or O_2^-, hydrogen peroxide, nitrogen gas, ammonia and ammonia gas, sulfur and sulfur gas, phosphoric acid, nitric acid, nitric acid, hydrofluoric acid, boric acid, sulfuric acid, carbonic acid, sulfonic acid, hydrochlorous acid, trichloroacetic acid, isophthalic acid, phthalic acid, graphite, carbon black, bone, pearl, enamel.

14. The solution of metal-polymer cholate(s) of claim 1, wherein the solution of metal-polymer cholate(s) used for a nano plastic industry or a nano textile industry includes a plastic or rubber polymer.

15. A solution of metal-polymer cholate(s), being used for an oxidation of producing oxygen cations and degradations (excluding chitosan solution of metal-polymer cholate(s)).

16. A solution of metal-polymer cholate(s), being used for a condensation and an oxidizing condensation.

17. A solution of metal-polymer cholate(s), being used in artificial imitated chitosan (excluding chitosan solution of metal-polymer cholate(s)), artificial imitated glucosamine (including the manufacture of amino metal polymer or amino metal compound or amino nano metal polymer or amino nano metal compound or nano metal polymer or nano metal compound).

18. A solution of metal-polymer cholate(s), being used in a biochemical

reaction for fermentation (including biological cell or bacteria or protein enzyme and its metabolite cultivation and purification).

19. A solution of metal-polymer cholate(s) being used in a metal enzyme biocatalyst (including a dry protein enzyme for enhancing activity).

20. A solution of metal-polymer cholate(s), being used in a disinfectant (excluding a chitosan solution of metal-polymer cholate(s)).

21. A solution of metal-polymer cholate(s), being used in a cell or bacteria or protein enzyme culture medium preservation system.

22. A solution of metal-polymer cholate(s), being used for dietic treatments and health cares (excludingchitosan solution of metal-polymer cholate(s)).

23. A solution of metal-polymer cholate(s), being used for the production of chemical matters of a plant.

24. A solution of metal-polymer cholate(s), being used for genes and carriers.

25. A solution of metal-polymer cholate(s), being used in a nano filtration system (excluding chitosan solution of metal-polymer cholate(s)).

26. A solution of metal-polymer cholate(s), being used for the production of a fermentation nano material.

27. A solution of metal-polymer cholate(s), being used for the nano inorganic matter and nano ceramic and nano plastic and nano textile industries.

28. A solution of metal-polymer cholate(s), being used in the manufacture of liquid crystals and semicondctors (including chitosan and biological semicondctors) and biochips.

29. A solution of metal-polymer cholate(s) is used for batteries.

30. A solution of metal-polymer cholate(s) is used for processing a solvent liquid (including the processing of oil products) and removing a solvent

liquid (including chitosan and processing organic solvents), and detecting the concentration of an organic gas.

31. The solution of metal-polymer cholate(s) of claims 2, wherein the metal salt is one or more monovalent, bivalent, or trivalent metal salts and the metal salt is a beryllium, magnesium, calcium, strontium, barium, radium, nickel, chromium, lead, copper, iron, zinc, titanium, manganese, cobalt, silver, gold, platinum, palladium, cadmium, lithium, rubidium, cesium, mercury, tin, zirconium, aluminum, thallium, antimony, bismuth, germanium, gallium, molybdenum, tungsten, yttrium, scandium, rhodium, iridium, technetium, osmium, ruthenium, rhenium, vanadium, indium, lanthanum and actinium series metal salt.

32. The solution of metal-polymer cholate(s) of claims 3, wherein the metal salt is one or more monovalent, bivalent, or trivalent metal salts and the metal salt is a beryllium, magnesium, calcium, strontium, barium, radium, nickel, chromium, lead, copper, iron, zinc, titanium, manganese, cobalt, silver, gold, platinum, palladium, cadmium, lithium, rubidium, cesium, mercury, tin, zirconium, aluminum, thallium, antimony, bismuth, germanium, gallium, molybdenum, tungsten, yttrium, scandium, rhodium, iridium, technetium, osmium, ruthenium, rhenium, vanadium, indium, lanthanum and actinium series metal salt.

33. The solution of metal-polymer cholate(s) of claims 4, wherein the metal salt is one or more monovalent, bivalent, or trivalent metal salts and the metal salt is a beryllium, magnesium, calcium, strontium, barium, radium, nickel, chromium, lead, copper, iron, zinc, titanium, manganese, cobalt, silver, gold, platinum, palladium, cadmium, lithium, rubidium, cesium, mercury, tin, zirconium, aluminum, thallium, antimony, bismuth, germanium, gallium, molybdenum, tungsten, yttrium, scandium, rhodium, iridium, technetium, osmium, ruthenium, rhenium, vanadium, indium, lanthanum and actinium series metal salt.

34. The solution of metal-polymer cholate(s) of claims 2, wherein the

number of R-COOH is equal to or greater then one, and the R is an alkyl radical or an alkyl matter, amd the R-COOH is monocarboxylic acid, dicarboxylic acid, tricarboxylic acid, acetic acid, citric acid, vitamin C, salicylic acid, ethylene glycol, formic acid, propionic acid, malonic acid, lactic acid, malic acid, succinic acid, adipic acid, maleic acid, fumaric acid, ortho acid, oxalic acid, lauric acid, tartaric acid, lycium acid, humic acid, nitrified humic acid, fatty acid, opines in a plant, carboxyl acid fiber, and carboxyl resin such as Amberlite IRC-50.

35. The solution of metal-polymer cholate(s) of claims 3, wherein the number of R-COOH is equal to or greater then one, and the R is an alkyl radical or an alkyl matter, amd the R-COOH is monocarboxylic acid, dicarboxylic acid, tricarboxylic acid, acetic acid, citric acid, vitamin C, salicylic acid, ethylene glycol, formic acid, propionic acid, malonic acid, lactic acid, malic acid, succinic acid, adipic acid, maleic acid, fumaric acid, ortho acid, oxalic acid, lauric acid, tartaric acid, lycium acid, humic acid, nitrified humic acid, fatty acid, opines in a plant, carboxyl acid fiber, and carboxyl resin such as Amberlite IRC-50.

36. The solution of metal-polymer cholate(s) of claims 4, wherein the number of R-COOH is equal to or greater then one, and the R is an alkyl radical or an alkyl matter, amd the R-COOH is monocarboxylic acid, dicarboxylic acid, tricarboxylic acid, acetic acid, citric acid, vitamin C, salicylic acid, ethylene glycol, formic acid, propionic acid, malonic acid, lactic acid, malic acid, succinic acid, adipic acid, maleic acid, fumaric acid, ortho acid, oxalic acid, lauric acid, tartaric acid, lycium acid, humic acid, nitrified humic acid, fatty acid, opines in a plant, carboxyl acid fiber, and carboxyl resin such as Amberlite IRC-50.

37. The solution of metal-polymer cholate(s) of claims 2, wherein the carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer is one or more carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer selected

from the collection of sucrose, maltose, lactose, rechalose; disaccharide group, monosaccharide group (including glucosamine), chitosan, degradated oils, seaweed cell wall (containing calcium without adding a metal salt), cereal such as an unhusked rice (containing calcium without adding a metal salt), cytokinin-O-glucosides including monosaccharide bimolecules or polyvinyl alcohol together with ammonia (or amine) matter or separate polyvinyl alcohol, or humic acid together with ammonia (or amine) matter without requiring a dissolution of acid, nitrified humic acid, peat, separate humic acid, nitrified humic acid, peat, or amino polyvinyl alcohol, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% of chitosan, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% artificial synthesized chitosan, or hydroxypropylmethyl cellulose (HPMC) together with ammonia (or amine) matter, or hydroxypropylmethyl cellulose (HPMC), or hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or/and oil or/and sugar mixed with each other.

38. The solution of metal-polymer cholate(s) of claims 3, wherein the carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer is one or more carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer selected from the collection of sucrose, maltose, lactose, rechalose; disaccharide group, monosaccharide group (including glucosamine), chitosan, degradated oils, seaweed cell wall (containing calcium without adding a metal salt), cereal such as an unhusked rice (containing calcium without adding a metal salt), cytokinin-O-glucosides including monosaccharide bimolecules or polyvinyl alcohol together with ammonia (or amine) matter or separate polyvinyl alcohol, or humic acid together with ammonia (or amine) matter without requiring a dissolution of acid, nitrified humic acid, peat, separate humic acid, nitrified humic acid, peat, or amino polyvinyl alcohol, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and

1~4% of chitosan, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% artificial synthesized chitosan, or hydroxypropylmethyl cellulose (HPMC) together with ammonia (or amine) matter, or hydroxypropylmethyl cellulose (HPMC), or hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or/and oil or/and sugar mixed with each other.

39. The solution of metal-polymer cholate(s) of claims 4, wherein the carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer is one or more carbohydrate molecule and/or hydroxyl or hydroxyl amino and/or carboxyl and/or carbohydrate polymer selected from the collection of sucrose, maltose, lactose, rechalose; disaccharide group, monosaccharide group (including glucosamine), chitosan, degradated oils, seaweed cell wall (containing calcium without adding a metal salt), cereal such as an unhusked rice (containing calcium without adding a metal salt), cytokinin-O-glucosides including monosaccharide bimolecules or polyvinyl alcohol together with ammonia (or amine) matter or separate polyvinyl alcohol, or humic acid together with ammonia (or amine) matter without requiring a dissolution of acid, nitrified humic acid, peat, separate humic acid, nitrified humic acid, peat, or amino polyvinyl alcohol, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% of chitosan, or 0.1~6% of hydroxypropylmethyl cellulose (HPMC) and 1~4% artificial synthesized chitosan, or hydroxypropylmethyl cellulose (HPMC) together with ammonia (or amine) matter, or hydroxypropylmethyl cellulose (HPMC), or hydroxyl or hydroxyl and amino and/or carboxyl and/or carbohydrate polymer or/and oil or/and sugar mixed with each other.

40. The solution of metal-polymer cholate(s) of claims 9, wherein the polymer bridging agent or hybrid moisture absorbent is polyvinylpyrrolidone (PVP).